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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shinji Morimoto

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6449

7590

10/20/2008

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EXAMINER

GEBREMICHAEL, BRUK A

ART UNIT

PAPER NUMBER

3715

NOTIFICATION DATE

DELIVERY MODE

10/20/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No. 10/522,184	Applicant(s) MORIMOTO ET AL.	
	Examiner BRUK A. GEBREMICHAEL	Art Unit 3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/17/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following office action is a **Final Office Action** in response to communications received on 06/17/2008. Claims 1 and 2 have been amended.

Information Disclosure Statement

2. The listing of the references, *JP 9-131698* and *JP 8-166982*, in the Search report comply with 37 CFR 1.98, and therefore considered in this office action.

Response to Amendment

3. Applicant's amendment to the Specification and to claim 1 is sufficient to overcome the objections set forth in the previous office action. The Examiner respectfully withdraws the objections.

Applicant's amendment to claim 1 is sufficient to overcome the 35 U.S.C 112, second paragraph rejection set forth in the previous office action with regard to claim 1. The Examiner respectfully withdraws this rejection with respect to claim 1.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- Claims 2-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "when the movement is evaluated possible" in lines 7-8 of claim 2 and in line 6 of claim 3 render the claims indefinite since it is not clear what claim limitation is encompassed as part of the claimed invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaiken 5,333,111 in view of Williams 6,192,777.

Regarding claim 1, Chaiken teaches the following claimed limitations, a teaching device for an automatic cutting machine having a cutting table (FIG 1, label 12), a cutting head (FIG 1, label 40), and a cutting area on the table for placing a sheet within the cutting area (FIG 1, label 20), the cutting head being capable of cutting the sheet only within the cutting area (col.4, lines 54-65), computing a position and a slope of the sheet to the cutting area, correcting marking data including cutting pattern of parts to be cut out from the sheet in accordance with the position and the slope of the sheet (col.7, lines 27-34 and lines 61-67), and cutting the sheet with corrected marking data (col.8, lines 8-17).

Chaiken further implicitly teaches, the teaching device, designating at least two teaching points on the sheet (col.6, lines 7-14), said teaching device comprising judgment means for judging whether the cutting pattern is contained within the cutting

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area (col.8, lines 8-17) after designation of the teaching points and the correction of the marking data (col.7, lines 61-68 and col.8, lines 1-5) and subsidiary means for evaluating whether movement of the marking data or the sheet in position makes the cutting pattern within the cutting area, when the error is judged by the judgment means (col.9, lines 16-26 and FIG 9).

However, Williams teaches judgment means for judging whether the cutting pattern is contained within the cutting area after designation of the teaching points and the correction of the marking data (col.3, lines 33-46) and subsidiary means for evaluating whether movement of the marking data or the sheet in position makes the cutting pattern within the cutting area, when the error is judged by the judgment means and for correcting the marking data relative to the cutting area when it is evaluated that movement of the marking data will make the cutting pattern within the cutting area, or the sheet relative to the cutting area when it is evaluated that movement of the sheet in position will make the cutting pattern within the cutting area (col.4, lines 10-28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Chaiken in view of Williams by implementing a correlation or matching of points between the marker and the workpiece so that the marker would be adjusted in order to coincide the selected points of the marker with the desired location on the workpiece thereby directing the cutting device to cut the workpiece.

Regarding claim 3, Chaiken in view of Williams teaches the claimed limitations as discussed above.

Williams further teaches, when the error is judged by the judgment means, said subsidiary means evaluates whether movement of the marking data in position makes the cutting pattern within the cutting area and corrects the marking data so as to confine the cutting pattern within the cutting area, when the movement is evaluated possible (col.4, lines 10-28).

Therefore, for the same reason stated as above, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Chaiken in view of Williams by implementing a correlation or matching of points between the marker and the workpiece so that the marker would be adjusted in order to coincide the selected points of the marker with the desired location on the workpiece thereby directing the cutting device to cut the workpiece.

- Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chaiken 5,333,111 in view of Williams 6,192,777 and further in view of Lundgren 4,833,957.

Regarding claim 2, Chaiken in view of Williams teaches the claimed limitations as discussed above.

Williams further teaches, the cutting table is provided with a conveyor (col.4, lines 48-57).

However, Chaiken in view of Williams does not explicitly teach, a teaching device for an automatic cutting machine according to claim 1, the cutting table is provided with a conveyor conveying the sheet along a longitudinal direction of the cutting area, and

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that, when the error is judged by the judgment means, said subsidiary means computes a length of the cutting pattern extending out of an edge of the cutting area, evaluates whether movement of the sheet in position makes the cutting pattern within the cutting area, and drives the conveyor at least by the length computed, when the movement is evaluated possible.

Lundgren further teaches, the cutting table is provided with a conveyor conveying the sheet along a longitudinal direction of the cutting area (col.3, lines 37-40), and that, when the error is judged by the judgment means, said subsidiary means computes a length of the cutting pattern extending out of an edge of the cutting area, evaluates whether movement of the sheet in position makes the cutting pattern within the cutting area, and drives the conveyor at least by the length computed, when the movement is evaluated possible (co1.3, lines 54-68 and co1.4, lines 1-2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the invention of Chaiken in view of Williams and further in view of Lundgren by implementing a measuring roll that gives an indication of the desired length of the sheet in order to stop the conveyor when this desired length of the sheet passes the cutting area, as taught by Lundgren.

Response to Arguments.

6. Applicant's arguments filled on 06/17/2008 have been fully considered but they are not persuasive. In the remarks, Applicant argues that,

(1) In For example, pages 5-11 of the specification describe the structure and acts of the judgment means and subsidiary means of claim 1 to bring a cutting pattern P that is judged to be outside of a cutting area 58, back into the cutting area 58 by either moving the sheet (e.g., by driving the conveyor belt 14) or by moving the marking data. None of the cited prior art discloses or suggest, either alone or in combination, the structure and acts disclosed in the present application that performs the claimed functions.

Chaiken discloses a device for cutting sheet material. Chaiken is particularly directed to dealing with alignment of a plaid or stripe in the fabrics in several adjacent pieces. See, Chaiken at co1.1, lines 30-33. Chaiken shows the alignment of fabric design and pattern in its Fig. 8, and misalignment in Fig 7. Chaiken also calls alignment "matching." Chaiken fails to disclose, and in fact never deals with, judging means and subsidiary means for judging whether the cutting pattern is within the cutting area or making the cutting pattern be within the cutting area, for evaluating whether movement of the marking data or movement the sheet in position makes the cutting pattern within the cutting area, when the error is judged by the judgment means, and for correcting the marking data or the sheet based on the evaluation. The cited secondary prior art references fail to cure the deficiencies of Chaiken.

Pomerleau merely discloses a cutting system that uses multiple markers for side-by-side set-ups and fails to disclose judging means or subsidiary means as recited by claim 1 of the present application.

Lundgren discloses a method and apparatus for cutting off selected length

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panels from an indefinite length strip. The problem that Lundgren deals with is illustrated in its Figs. 1-3. "TE" in Fig. 3 represents a transverse edge. In Figs. 9-11, Lundgren discloses how to detect the deviation D of the transverse edge TE from the perpendicularity to the strip S. Once the deviation is detected, the cutting direction is modified. Lundgren also discloses that the cutting means can be shifted to tend to reduce the deviation D. See, col. 11, lines 14-35. However, Lundgren fails to disclose or suggest a teaching device that includes judgment means for judging whether the cutting pattern is contained within the cutting area, after designation of the teaching points and the correction of the marking data or a teaching device that includes subsidiary means for evaluating whether **movement of the marking data** or **movement of the sheet** makes the cutting pattern within the cutting area, when the error is judged by the judgment means, and **for correcting the marking data** relative to the cutting area when it is evaluated that movement of the marking data will make the cutting pattern within the cutting area, or **correcting the sheet** relative to the cutting area when it is evaluated that movement of the sheet in position will make the cutting pattern within the cutting area.

The Office Action cites to columns 6, lines 3-15 and 11, lines 15-29 of Lundgren as allegedly disclosing the claimed judging and subsidiary means. These sections, however, merely disclose a device for detecting deviation (67) from a straight line and for moving the cutting means 46 to attempt to decrease or eliminate the deviation. . . . Lundgren simply fails to disclose judging means for judging whether a cutting pattern is containing within a cutting area. Moreover, even if its computer 89 is considered judging

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means (which it is not), there is nothing disclosed in Lundgren that determines whether (1) movement of the sheet or (2) movement of the marking data makes the pattern fall within the cutting area, and makes the corresponding correction. In great contrast to the claimed invention, Lundgren merely discloses a device for cutting sections of sheets and attempts adjust the cutting device when the sheet is not straight.

- In response to argument (1), the first section of Applicant's argument appears to be a piecemeal analysis (attacking a single reference) although obviousness under 35 U.S.C. 103(a) is based on the combination of references.

However, even if in the previous office action, it is indicated that Chaiken does not explicitly disclose the *judgment means* and the *subsidiary means*, these features are implicitly taught in Chaiken's invention. The interpretation of these features is discussed below.

For example, with regard to the claimed feature, *judgment means for judging whether the cutting pattern is contained within the cutting area, after designation of the teaching points and the correction of the marking data*, the line "The **controller** then provides command signals to move at block 100 the **cutting head to a first, match-to-fabric point** 102 (M0). The operator then manually slews **the cutting head** to ensure that **the theoretical match-to-fabric point** is **aligned** with the **fabric design**. This operation is the only one in the preferred embodiment which requires manual input. Thereafter, the present system accomplishes the programmed functions without the need for human intervention when configured as an automatic design matching." (col.8, lines 8-17), teaches the recited limitation, *judgment means for judging whether the*

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cutting pattern is contained within the cutting area. In the above teaching, the **controller** is the *judgment means*, and the operator **slewing the cutting head to ensure that the theoretical match-to-fabric point is aligned with the fabric design** is clearly the perception of *judging whether the cutting pattern is contained in the cutting area*. Of course, one may assume from the above quotation that the judging procedure does not appear to be automatic. However, the teaching further suggested that the system provides for a pattern match either manually or **automatically** (col.8, lines 24-28), supporting the fact that these features are taught implicitly in Chaiken's invention.

Obviously, the above process is carried out by comparing the operation with stored images, i.e. *after designation of the teaching points and the correction of the marking data*. This is taught as follows. The line, "The controller commands an image to be taken of this match point. The present invention provides for a **subsequent alignment between the first stored image at (R1)** and that of **(M1)** either manually or **automatically** in accordance with algorithms detailed hereinafter (block 116). The **process is repeated for each pattern to be matched to the fabric**. . . The present **system performs** the same match process as before, either manually or **automatically, to adjust** the location of **the pattern** vis-a-vis the fabric sheet." (col.8, lines 45-51), clearly teaches the designation of the teaching points and the correction (adjustment) of the marking data.

Further, as the amendment made to the claims clearly defines the claimed limitations, the additional reference discovered (Williams 6,192,777) also appears to teach or suggest these claimed features.

For example the claimed feature, *subsidiary means for evaluating whether movement of the marking data or the sheet in position makes the cutting pattern within the cutting area, when the error is judged by the judgment means, and for correcting the marking data relative to the cutting area when it is evaluated that movement of the marking data will make the cutting pattern within the cutting area, or the sheet relative to the cutting area when it is evaluated that movement of the sheet in position will make the cutting pattern within the cutting area*, is clearly taught by Williams.

For instance the line, "The **adjustment process is begun** by establishing a correlation or **matching of points** between **the marker** and **the workpiece**. Piece to piece matching of parts lying adjacent to each other on the workpiece is also established. . . . This **process is repeated** as necessary to **compensate** for **all observed irregularities**. When **adjustment of the marker** is complete, **the adjusted marker is utilized** to direct **the cutting device to cut** the pieces of material from **the workpiece**." (col.4, lines 10-28), clearly teaches the above claimed feature. Note that, according to the claim when the misalignment is observed (i.e. *when the error is judged by the judgment means*) the subsidiary means evaluates either *correcting the marking data relative to the cutting area when it is evaluated that movement of the marking data will make the cutting pattern within the cutting area, OR the sheet relative to the cutting area when it is evaluated that movement of the sheet in position will make the cutting pattern within the cutting area*. Of course, according to Williams teaching, **the marker** is **adjusted** to compensate for *irregularities* so that the selected points thereon concede with a desired location on the workpiece, and this adjusted marker is utilized to cut the

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workpiece, and this teaching is consistent with the recited limitation, *correcting the marking data relative to the cutting area when it is evaluated that movement of the marking data will make the cutting pattern within the cutting area.*

Therefore, the Examiner concludes that Applicant's current claimed invention would have still been obvious to one of ordinary skill in the art at the time of the invention was made in view of the prior arts and for the reasons discussed above.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this final office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filled within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruk A. Gebremichael whose telephone number is

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(571)270-3079. The examiner can normally be reached on Monday to Friday (7:30AM-5:00PM) ALT. Friday OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI XUAN can be reached on (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bruk A Gebremichael/
Examiner, Art Unit 3715

/XUAN M. THAI/

Supervisory Patent Examiner, Art Unit 3715